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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/699,495	10/31/2000	Allen Louis Gorin	112233-CONT-1	8836

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AT&T CORP.
ROOM 2A207
ONE AT&T WAY
BEDMINSTER, NJ 07921

EXAMINER	
PHAN, JOSEPH T	
ART UNIT	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	09/699,495	GORIN ET AL.	
	Examiner	Art Unit	
	Joseph T. Phan	2614	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *29 February 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-3,7,9-13,15-30,34,36-40,42-54,56 and 57* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3,7,9-13,15-18,20-30,34,36-40,42-45,47-54,56 and 57* is/are rejected.

7)☒ Claim(s) *19 and 46* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 02/29/2008 has been entered.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-3, 7, 9-13, 15-18, 20-30, 34, 36-40, 42-45, 47-54, and 56-57 rejected under 35 U.S.C. 102(e) as being anticipated by O'Brien, Patent #6,601,031.

Regarding claims 1 and 28, O'Brien teaches an automated task classification routing system(Fig.3) that operates on a task objective of a user through a natural language dialog with the user in which system prompts are not ordered in a menu(Fig.4), the system comprising:
a recognizer that spots at least one of a plurality of meaningful phrases in substantially simultaneous user natural language verbal(7 Fig.4; "play message") and non-verbal input(8 Fig.4; DTMF sequence of 20), wherein the natural language verbal and non-verbal input each convey different information(*'play message' is different than DTMF 20*) and are associated with

a coordinated message that achieves an appropriate response*(9 Fig.4; VMS recognizes coordinated message and plays the message which is the response*), each of the plurality of meaningful phrases having an association with at least one of a predetermined set of task objectives(*5-12 Fig.4; each phrase has a predetermined task*), and a task classifier that makes a classification decision based at least partly on the spotted at least one of the plurality of meaningful phrases(5-12 Fig.4 and col.3 line 42-col.4 line 9); and a task router that routes the user's request in order to perform at least one of the task objectives based on the classification decision(Fig.3 and items 5-12 Fig.4).

Regarding claims 2 and 29, O'Brien teaches the automated task classification system of claims 1 and 28, wherein the meaningful phrases are expressed in a multimodal form(Fig.4; verbal and DTMF sequence is multimodal).

Regarding claims 3 and 30, O'Brien teaches the automated task classification system of claims 1 and 28wherein the multimodal form includes inputs from at least one channel(Fig.4).

Regarding claims 7 and 34, O'Brien teaches the automated task classification system of claims 1 and 28, wherein the meaningful phrases in the user's input communication received by the recognizer are derived from the user's actions (Fig.4).

Regarding claims 9 and 36, O'Brien teaches the automated task classification system of claims 1 and 28, further comprising a dialog module that enters into a dialog with the user to obtain a feedback response from the user (5-12 Fig.4).

Regarding claim 10, O'Brien teaches the automated task classification system of claim 9, wherein the dialog module prompts the user to provide a feedback response that includes additional information with respect to the user's initial input communication(5-12 Fig.4).

Regarding claim 11, O'Brien teaches the automated task classification system of claim 9, wherein the dialog module prompts the user to provide a feedback response that includes confirmation with respect to at least one of the set of task objectives determined in the classification decision(5-12 Fig.4).

Regarding claim 12, O'Brien teaches the automated task classification system of claim 1, wherein the task classifier routes the input communication based on the classification decision(5-12 Fig.4).

Regarding claim 13 O'Brien teaches the automated task classification system of claim 12, wherein the task objective is performed after the input communication is routed by the task classifier(5-12 Fig.4).

Regarding claims 15 and 42, O'Brien teaches the automated task classification system of claims 1 and 28, wherein the system is used for customer care purposes(5-12 Fig.4; providing voicemail services is customer care).

Regarding claims 16 and 43, O'Brien teaches the automated task classification system of claims 1 and 28, wherein the classification decision and the corresponding input communication of the user are collected by the system for automated learning purposes(5-12 Fig.4).

Regarding claims 17 and 44, O'Brien teaches the automated task classification system of claims 1 and 28, wherein the association between the plurality of meaningful phrases and the predetermined set of task objectives is based at least partly on a measure of usefulness of one of the plurality of meaningful phrases to a specified one of the predetermined task objectives(5-12 Fig.4; performing the action is measured at 100% useful).

Regarding claims 18 and 45, O'Brien teaches the automated task classification system of claims 17 and 44, wherein the usefulness measure is a salience measure(5-12 Fig.4 and col.3 lines 10-34; the system recognizing the user input is a salience measure).

Regarding claims 20 and 47, O'Brien teaches the automated task classification system of claims 18 and 45, wherein each of the plurality of meaningful phrases has a salience measure exceeding a predetermined threshold*(5-12 Fig.4 and col.3 lines 10-34; input phrases exceeds a salience measure predetermined threshold which is recognized by the ASR as a proper task).*

Regarding claims 21 and 48, O'Brien teaches the automated task classification system of claims 1 and 28, wherein the association between the meaningful phrases and the predetermined set of task objectives is based at least partly on a measure of commonality within a language of the meaningful phrases(5-12 Fig.4 and col.3 lines 10-34).

Regarding claims 22 and 49, O'Brien teaches the automated task classification system of claim 21 and 48, wherein the measure of commonality is a mutual information measure(5-12 Fig.4 and col.3 lines 10-34).

Regarding claims 23 and 50, O'Brien teaches the automated task classification system of claims 22 and 49, wherein each of the plurality of meaningful phrases has a mutual information measure exceeding a predetermined threshold*(5-12 Fig.4 and col.3 lines 10-34; input phrases exceeds a mutual information measure predetermined threshold which is recognized by the ASR as a proper task).*

Regarding claims 24 and 51, O'Brien teaches the automated task classification system of claims 1 and 28, wherein the task classifier makes the classification decision using a confidence function*(5-12 Fig.4 and col.3 lines 10-34; ASR has a confidence function to recognize phrases).*

Regarding claims 25 and 52, O'Brien teaches the automated task classification system of claims 1 and 28, wherein the input communication from the user represents a request for at least one of the set of predetermined task objectives(5-12 Fig.4).

Regarding claims 26 and 53, O'Brien teaches the automated task classification system of claims 1 and 28, wherein the input communication is responsive to a query of a form "How may I help you?"(*col. 4 lines 3-5 and Fig.4;* this is presented in multiple forms by the system).

Regarding claims 27 and 54, O'Brien teaches the automated task classification system of claims 1 and 28, wherein each of the natural language verbal input and the non-verbal input are directed to one of the set of predetermined task objectives and each of the natural language verbal input and the non-verbal input is labeled with the one task objective to which it is directed(5-12 Fig.4 and col.3 lines 10-34).

Regarding claim 37, O'Brien teaches the automated routing system of claim 36, wherein the dialog module prompts the user to provide a feedback response that includes additional information with respect to the user's request(5-12 Fig.4 and col.3 lines 10-34).

Regarding claim 38, O'Brien teaches the automated routing system of clam 36, wherein the dialog module prompts the user to provide a feedback response that includes confirmation with respect to at least one of the set of task objectives determined in the classification decision(5-12 Fig.4 and col.3 lines 10-34).

Regarding claim 39, O'Brien teaches the automated routing system of claim 36, wherein if the task classifier cannot make a classification decision after the dialog is conducted with the user, the router routes the user's request to a human for assistance(5-12 Fig.4 and col.3 lines 10-34).

Regarding claim 40, O'Brien teaches the automated routing system of claim 39, wherein the task objective is performed after the user's request is routed(5-12 Fig.4 and col.3 lines 10-34).

Regarding claim 56, O'Brien teaches the automated task classification system of claim 1, through a natural language dialog with the user in which system prompts are not ordered in a menu(Fig.4), further comprising in interpretation module configured to apply a confidence function based on a probabilistic relation between the spotted at least one of the plurality of meaningful phrases in the input communication of the user and the at least one of the predetermined set of task objectives, wherein the task classifier makes the classification decision based, at least partly on, a result of the applied confidence function(*5-12 Fig.4 and col.3 lines 10-34; ASR has a confidence function in order to recognize phrases and it's associated task).*

Regarding claim 56, O'Brien teaches the automated routing system of claim 28, further comprising an interpretation module configured to apply a confidence function based on a probabilistic relation between the spotted at least one of the plurality of meaningful phrases in the user's request and the at least one of the predetermined set of task objectives, wherein the task classifier makes the classification decision based, at least partly, on a result of the applied confidence function(*5-12 Fig.4 and col.3 lines 10-34; ASR has a confidence function in order to recognize phrases and it's associated task).*

Allowable Subject Matter

4. Claims 19 and 46 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and intervening claims 17-18 and 44-45.

Regarding claims 19 and 46, the prior art of record does not expressly disclose wherein the salience measure is represented as a conditional probability of the task objective being requested given an appearance of one of the plurality of meaningful phrases in the input communication, the conditional probability being a highest value in a distribution of conditional probabilities over the set of predetermined task objectives

Response to Arguments

5. Applicant's arguments with respect to claims 1-3, 7, 9-13, 15-30, 34, 36-40, 42-54, and 56-57 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph T. Phan whose telephone number is (571) 272-7544. The examiner can normally be reached on Mon-Fri 9am-6pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Fan Tsang can be reached on (571) 272-7547. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Fan Tsang/
Supervisory Patent Examiner, Art Unit 2614

/Joseph T Phan/
Examiner, Art Unit 2614